

High Efficiency Low LID Mono PERC with Half-cut Technology

Front side performance equivalent to conventional low LID mono PERC:

-High module conversion efficiency (up to 20.9%)
-Better energy yield with excellent low irradiance performance and temperature coefficient

-First year power degradation < 2%

Glass/glass lamination ensures 30 year product lifetime, with annual power degradation < 0.45%, 1500V compatible to reduce BOS cost

Solid PID resistance ensured by solar cell process optimization and careful module BOM selection

Bifacial technology enables additional energy harvesting from rear side (up to 25%) Reduced resistive loss with lower operating current

Higher energy yield with lower operating temperature Reduced hot spot risk with optimized electrical design and lower operating current

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO 9001:2008: ISO Quality Management System

ISO 14001:2004: ISO Environment Management System

TS62941: Guideline for module design qualification and type approval

OHSAS 18001: 2007 Occupational Health and Safety



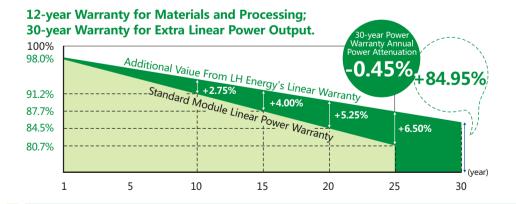






* Specifications subject to technical changes and tests. LH Energy reserves the right of interpretation.

Founded in 2010, LH Energy is the world's leading comprehensive solutions provider for solar energy.We believe close cooperation with our partners is critical to success. LH Energy now distributes its PV products to over 60 countries all over the world. LH Energy is able to provide exceptionml service to each customer in each market and supplement our innovative, reliable products with the backing of LH Energy as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.





COMPANY NAME: LIGHT & HOPE ENERGY CO.,LTD

FACTORY ADD: 88/24-25 MOO 15. BANGSAOTHONG SUB- DISTRICT. BANGSAOTHONG DISTRICT SAMUT PRAKARN THAILAND 10570

TAX ID: 0115562029595 **TEL:** +66 02 0001217 **Email:** sales@lh-solar.com

Website: www.lighthopeenergy.com

LHM72HB-166M-9BB 425-455W

Model Number Testing Condition
Testing Condition
Maximum Power (Pmax/W)
Open Circuit Voltage (Voc/V)
Short Circuit Current (Isc/A)
Voltage at Maximum Power (Vmp/V)
Current at Maximum Power (Imp/A)
Module Efficiency (%)

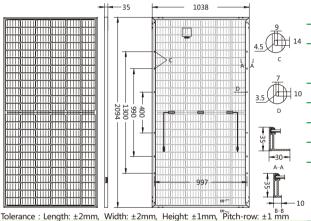
Electrical Characteristics Test uncertainty for Pmax: ±3						
425W	430W	435W	440W	445W	450W	455W
STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT
425 317.4	430 321.1	435 324.9	440 328.6	445 332.3	450 336.I	455 339.8
48.7 45.6	48.9 45.8	49.1 45.9	49.2 46.0	49.4 46.2	49.6 46.4	49.8 46.6
11.22 9.06	11.30 9.13	11.36 9.18	11.45 9.25	11.52 9.30	11.58 9.36	11.65 9.41
40.4 37.7	40.5 37.9	40.8 38.0	41.0 38.2	41.2 38.4	41.4 38.6	41.6 38.8
10.52 8.42	10.60 8.49	10.66 8.54	10.73 8.60	10.80 8.65	10.87 8.70	10.93 8.76
19.6	19.8	20.0	20.2	20.5	20.7	20.9

STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25°C, Spectra at AM1.5 NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/S

Electrical characteristics with different rear side power gain (reference to 380W front)

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Pmax/W	Voc/V	Isc/A	Vmp/V	Imp/A	Pmax gain
467	49.4	12.09	41.2	11.34	5%
490	49.4	12.67	41.2	11.88	10%
512	49.5	13.24	41.3	12.42	15%
534	49.5	13.82	41.3	12.96	20%
556	49.5	14.40	41.3	13.50	25%

Design (mm)



Mechanical Parameters

Cell Orientation: 144 (6x24)	Operational Temperature: -40°C \sim +85°C
Junction Box: IP68,three diodes	Power Output Tolerance: 0~+5 W
Output Cable: 4mm², 300mm in length,	Voc and Isc Tolerance: ±3%
length can be customized	Maximum System Voltage: DC1500V (IEC/UL)
Glass: Dual glass 2.0mm coated tempered glass	Maximum Series Fuse Rating: 20A
Frame: Anodized aluminum alloy frame	Nominal Operating Cell
Weight: 27.5kg	Temperature: 45±2°C
Dimension: 2094×1038×35mm	Safety Class: Class II
Packaging: 30pcs per pallet	Fire Rating: UL

Temperature Ratings (STC)

Temperature Coefficient of Isc +0.050%/°C Temperature Coefficient of Voc -0.284%/°C Temperature Coefficient of Pmax -0.350%/°C

Mechanical Loading

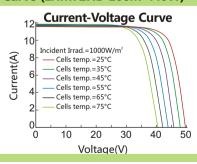
Front Side Maximum Static Loading 5400Pa Rear Side Maximum Static Loading 2400Pa

150pcs per 20'/GP

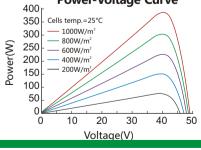
660pcs per 40'/HC

Hailstone Test 25mm Hailstone at the speed of 23m/s

I-V Curve (LHM72HB-166M-440W)



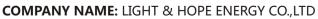
Power-Voltage Curve



Current-Voltage Curve 1000W/m 10 800W/m² Current(A) 6-600W/m2 400W/m 200W/m² 30 40 10 20 50 Voltage(V)

Operating Parameters

Bifaciality: Glazing 70±5%



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